



Product Description

The Tannoy CMS501 is a full bandwidth; high power and high sensitivity ceiling monitor system. The design comprises a 130mm (5.00") transducer mounted in a vented, injection moulded, paintable front baffle manufactured from UV/weather resistant UL94V-0 ABS material.

The point source configuration of the Tannoy ICTTM driver *s mid-bass and tweeter sections ensures a wide and controlled dispersion for optimum coverage; this while avoiding the massive loss of energy in the vertical plane, at the crossover frequency, inherent in two-way discrete designs. The ICTTM (Inductive Coupling Technology) drive unit also addresses the two most common component failures experienced in background music and sound reinforcement systems, the tweeter and the crossover reliability. The use of a wireless electromagnetic tweeter means that no crossover is required in the design; this therefore ensures that an ICTTM unit is exceptionally reliable and therefore ideal for applications where constant heavy usage is the norm. This aluminium high frequency dome has a deep drawn skirt that sits on the inside of the low frequency voice coil in the same magnetic gap. The skirt is like a single shorted turn that is induced with high frequency information generated by the low frequency voice coil, which is fed a full bandwidth signal. The mineral loaded polypropylene cone material and nitrile rubber surround further enhance durability and long-term reliability.

This compact unit is specifically designed for applications requiring the combination of premium sonic quality for music and speech reinforcement and exceptional reliability.

The CMS501 is equipped with a low insertion loss 30W line transformer easily configurable to the following settings via front baffle mounted rotary tapping switch:

70V systems: 30W / 15W / 7.5W / 3.75W / OFF & low Impedance operation
100V systems: 30W / 15W / 7.5W / OFF & low Impedance operation

Two CMS501 model versions and a separate back can are available to satisfy the vast majority of installation application requirements:

CMS501 BM (Blind Mount) - supplied with an integral back can.
CMS501 PI (Pre-Install) - supplied without a back can.
CMS501 PI Back Can (Pre-wire back can) - use with the CMS 501 PI.

The zinc plated steel back cans have an integrated, recessed termination box. The removable locking connector has screw terminals for secure wire termination and "loop through" facility. Strain relief is provided by a clamping mechanism for use with plenum rated cable or conduit.

Spring loaded self-aligning clamps make for quick and easy installation, while all models are also supplied with two tile support rails and one C-ring included in the package. A plaster (mud) ring is available as an optional accessory.

Features

- 130mm (5.00") ICTTM transducer for greater durability and longevity
- High power and high sensitivity with extended frequency response
- Wide, controlled constant directivity dispersion for optimum coverage.
- Does not suffer from massive loss of energy in the vertical plane at crossover caused by two way discreet designs
- UV/weather resistant UL94V-0 ABS front baffle
- Blind Mount and Pre Install options
- No crossover required
- Easily accessible tapping switch on front baffle.
- Low insertion loss 30W line transformer
- Packaged with tile rails and C-ring for quick and easy installation and simple stocking logistics
- Five year warranty

Applications

- Multi-zone foreground music & paging systems
- Boardrooms and offices
- Business music systems
- Airports, convention centres, hotels
- Reception and waiting rooms
- Houses of worship
- Retail outlets and shopping malls
- Lounges and bars
- Cruise ships
- Courtrooms

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TECHNICAL SPECIFICATIONS

System	CMS501
Frequency Response (-3dB) ⁽¹⁾ BM Back can	85Hz - 22kHz
Frequency Range (-10dB) ⁽¹⁾ BM Back can	74Hz - 24kHz
Frequency Range (-10dB) ⁽¹⁾ PI Back can	74Hz - 24kHz
System Sensitivity (1W @1m) ⁽²⁾ 89dB (1W = 2.45V for 6 Ohms)	
Nominal Coverage Angle	90 degrees conical
Coverage Angle (1kHz to 6kHz)	105 degrees
Directivity Factor (Q)	5.6 averaged 1kHz to 6kHz
Directivity Index (DI)	7.0 averaged 1kHz to 6kHz
Rated Maximum SPL ⁽²⁾	
Average	106dB
Peak	112dB
Power Handling	
Average	50W
Programme	100W
Peak	200W
Recommended Amplifier Power	100W @ 6 Ohms
Nominal Impedance	6 Ohms
Transformer Taps (via front rotary switch)	
70V	30W / 15W / 7.5W / 3.75W / OFF & Low Impedance operation
100V	30W / 15W / 7.5W / OFF & Low Impedance operation
Distortion	
10% Full Power	2nd Harmonic 3rd Harmonic
250Hz	2.81% 0.14%
1kHz	0.5% 0.25%
10kHz	1.77% 0.04%
1% Full Power	2nd Harmonic 3rd Harmonic
250Hz	0.18% 0.09%
1kHz	0.16% 0.22%
10kHz	0.32% 0.09%
Crossover	7kHz inductively coupled

(1) Average over stated bandwidth. Measured at 1 metre on axis.
(2) Unweighted pink noise input, measured at 1 metre in an anechoic chamber
(3) Long term power handling capacity as defined in EIA - 426B test

A full range of measurements, performance data, CLF and Ease™ Data can be downloaded from www.tannoy.com

Full independent verification of published specifications carried out by NWA Labs, California can also be obtained from the downloads section of www.tannoy.com

Tannoy operates a policy of continuous research and development. The introduction of new materials or manufacturing methods will always equal or exceed the published specifications, which Tannoy reserves the right to alter without prior notice. Please verify the latest specifications when dealing with critical applications.

Transducers	
Low Frequency	130mm (5.00") mineral loaded polypropylene ICT™
High Frequency	ICT™ aluminium dome
Physical	
Enclosure	
Back can	Zinc plated steel
Baffle	Reflex loaded UL 94V-0 rated ABS
Grille	Steel, with weather resistant coating
Safety Features	Safety ring located at rear of enclosure for load bearing safety bond
Clamping Design	Security toggle clamp
Min / Max Clamping Range	0.0mm (0.0") / 20.0mm (0.79")
Recommended Clamp Torque	1.5Nm
Back Can Options	
Blind Mount (BM)	Complete with fixed back can
Pre Install (PI)	Separate back can for pre installation
Cable Entry Options	Cable clamp and squeeze connector for conduit up to 22mm
Conduit Knockouts	3 Sets of horizontal positions 19 / 22 / 28mm (0.75" / 0.87" / 1.10")
Connectors	Removable locking connector with screw terminals with "loop through" facility
Safety Agency Ratings (pending)	UL-1480, UL-2043, CE
BM Hole Cutout Diameter	190mm (7.48")
PI Hole Cutout Diameter	190mm (7.48")
Dimensions	
Bezel diameter	210mm (8.27")
Front of ceiling to rear of back can (BM)	189.5mm (7.46")
Front of ceiling to top of safety loop (BM)	206.8mm (8.14")
Front of ceiling surface to rear of speaker unit (PI)	135.6mm (5.34")
Front of accessory back can bezel to top of safety loop (PI)	153.50mm (6.04")
Net Weight (ea)	
CMS501 BM	3.60kg (7.94lbs)
CMS501 PI	2.90kg (6.39lbs)
PI back can	2.60kg (5.73lbs)
Included Accessories	C Ring, tile bridge, paint mask, cutout template, grille
Optional Accessories	Plaster (Mud) Ring

Ordering Information

PART NUMBER	MODEL NAME	BAFFLE / GRILLE COLOUR	PACKED QUANTITY
8001 4450	CMS501 BM	White / paintable	2
8001 4460	CMS501 PI	White / paintable	2
8001 4180	CMS501 Plaster (Mud) Ring	Zinc plated steel	10
8001 3830	CMS501 PI back can	Zinc plated steel	1

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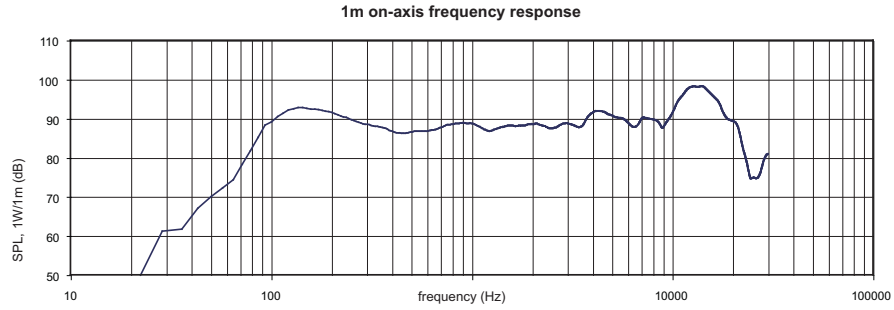
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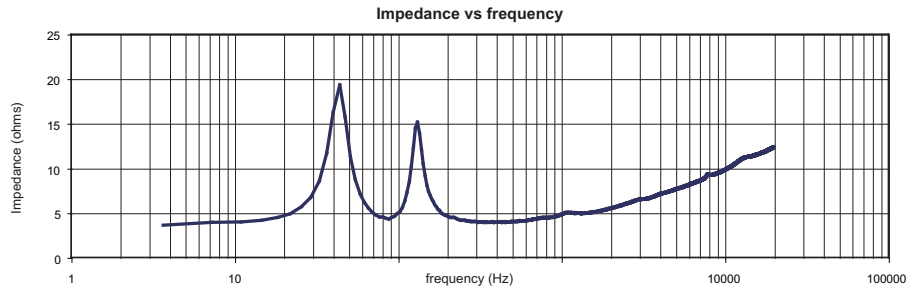


PERFORMANCE MEASUREMENTS

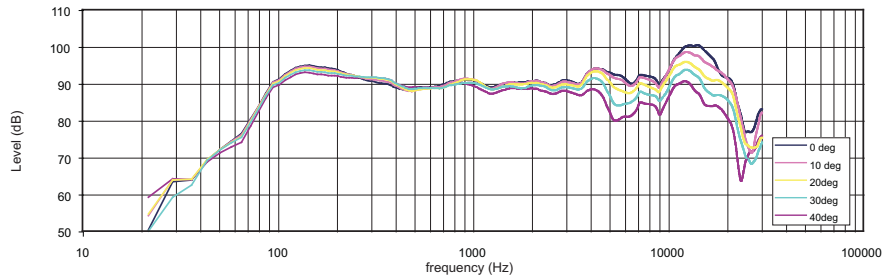
ANECHOIC FREQUENCY RESPONSE



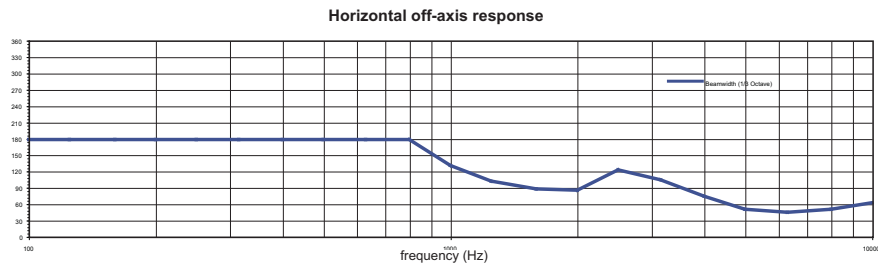
IMPEDANCE



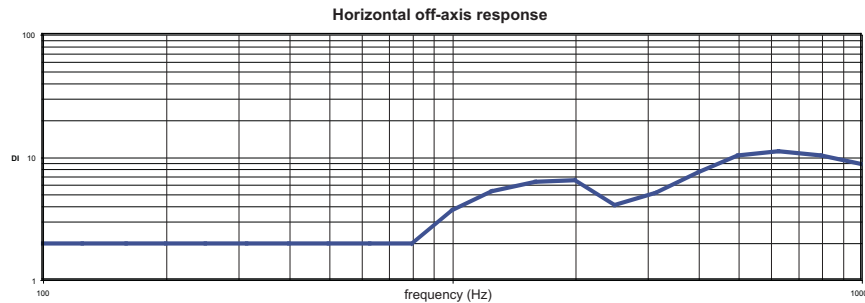
OFF AXIS RESPONSE



BEAMWIDTH



DIRECTIVITY INDEX



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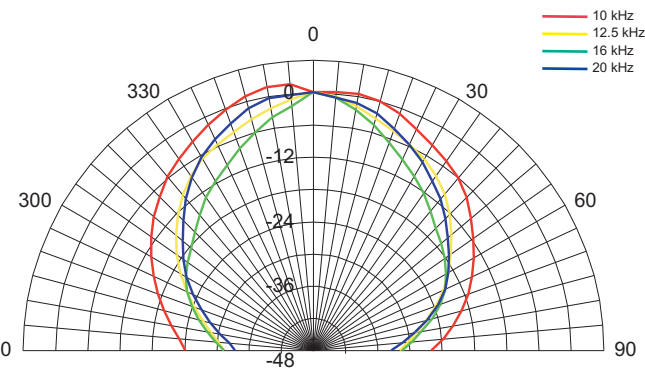
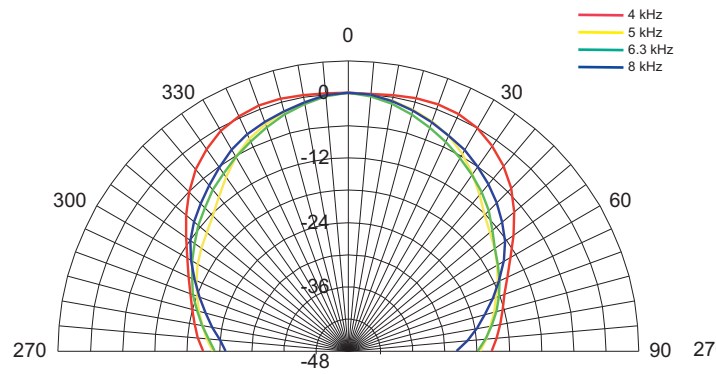
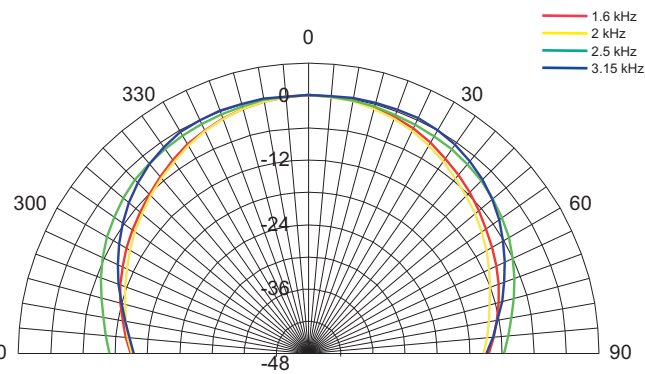
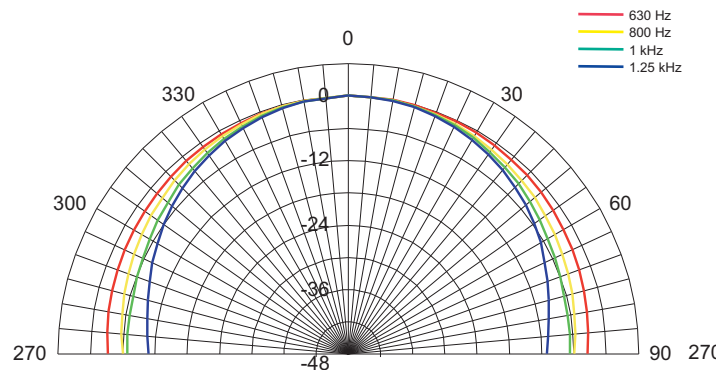
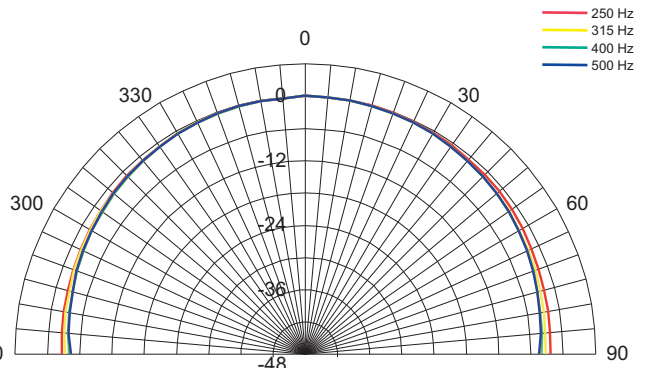
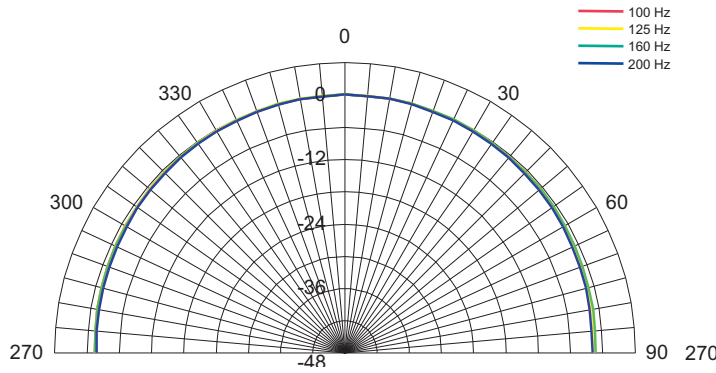
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PERFORMANCE MEASUREMENTS POLAR PLOTS (1/3 OCTAVE)



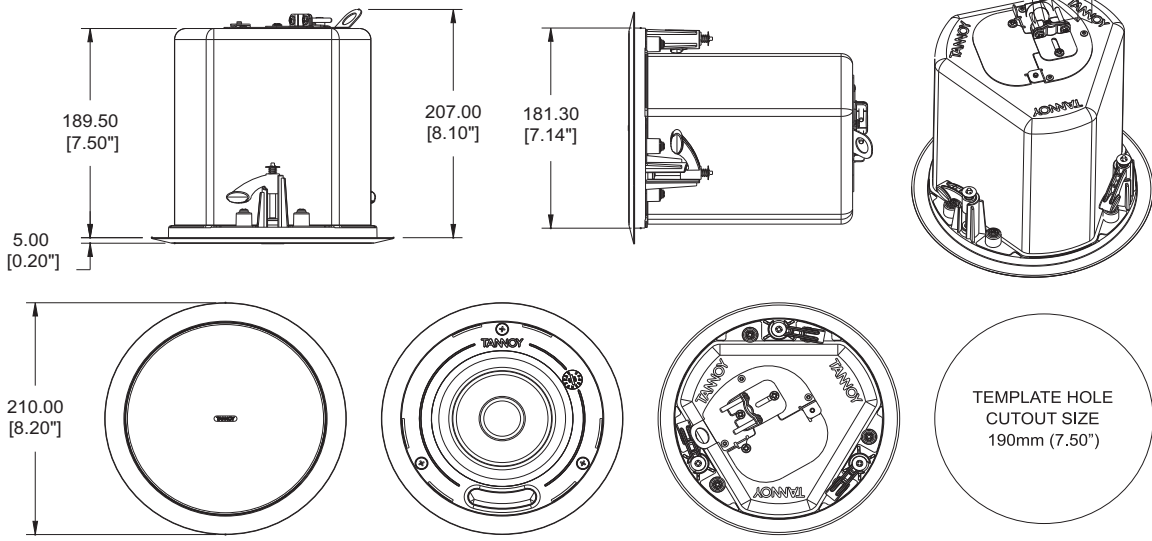
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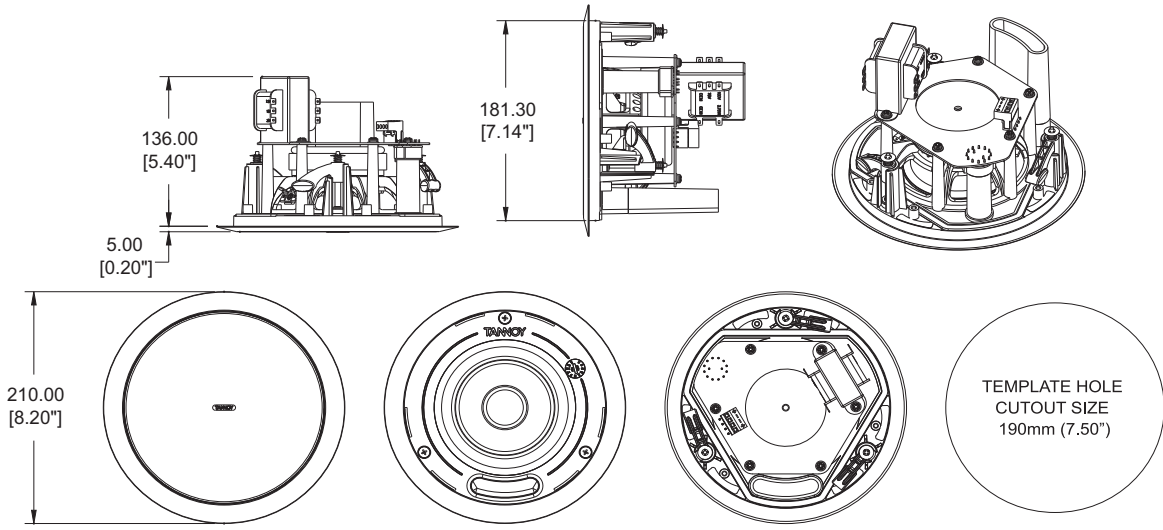
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DIMENSIONAL SKETCHES



CMS501 BM TEMPLATE HOLE CUTOUT SIZE - 190mm (7.50")



CMS501 PI TEMPLATE HOLE CUTOUT SIZE - 190mm (7.50")

Ordering Information

PART NUMBER	MODEL NAME	BAFFLE / GRILLE COLOUR	PACKED QUANTITY
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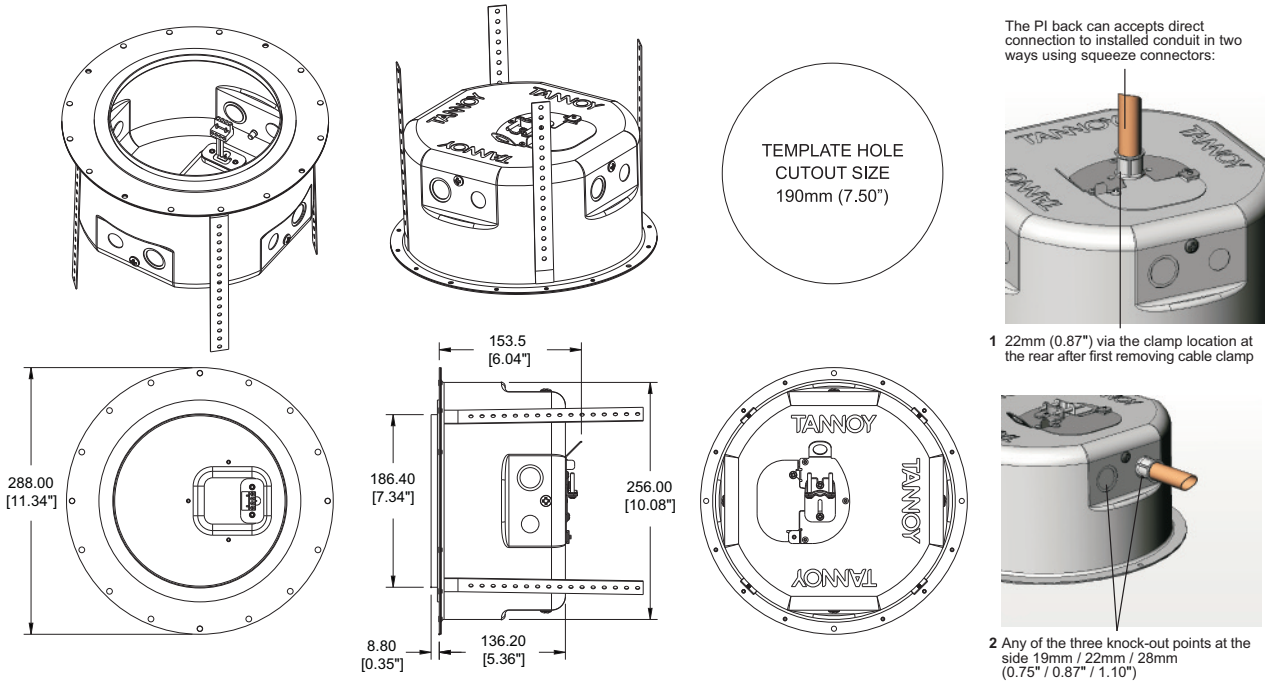
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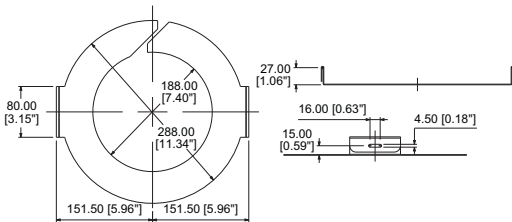
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DIMENSIONAL SKETCHES

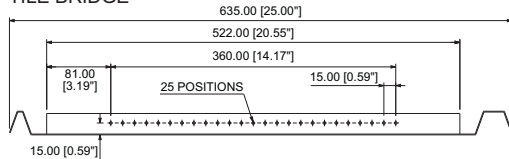


CMS501 PI BACK CAN TEMPLATE HOLE CUTOUT SIZE - 190mm (7.50")

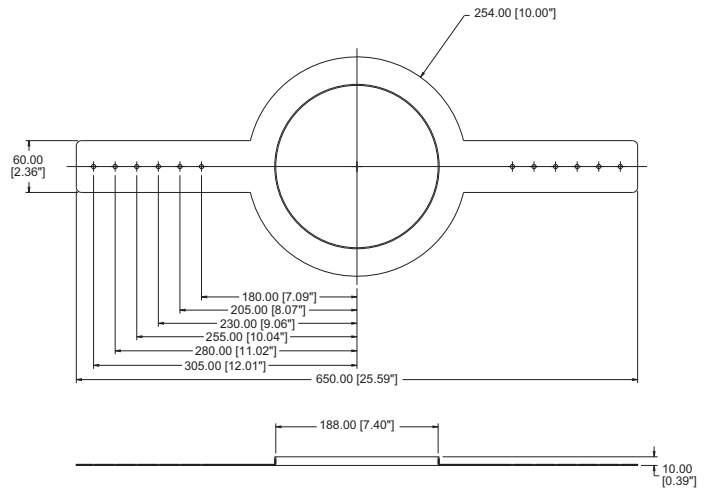
SUPPLIED ACCESSORIES C-RING



TILE BRIDGE



OPTIONAL ACCESSORIES PLASTER (MUD) RING





Architectural specifications

The Ceiling Monitor System shall consist of a 130mm (5.00") full range, point source ICTTM transducer mounted in a vented, injection moulded, paintable front baffle in UL94V-0 ABS material.

The back can in both PI (pre-install) & BM (Blind-mount variants) shall be constructed of zinc plated steel. A recessed termination box shall be integrated with the back can, a removable locking connector with screw terminals for secure wire termination with "loop through" facility shall be provided. Strain relief will be provided by a clamping mechanism for use with plenum rated cable or conduit.

For prewiring the PI (pre-install) back can is provided with conduit knockouts (19mm / 22mm / 28mm, 0.75" / 0.87" / 1.14"). A safety ring is located on the rear of the back can for a load bearing safety bond.

Performance of the ceiling monitor shall meet or exceed the following criteria: The system shall have a conical coverage pattern of 105degrees (1kHz to 6kHz). Frequency response measured on axis shall be 74 Hz - 24kHz (-10dB from rated sensitivity, measured in an IEC baffle in an anechoic chamber) with no equalization. Sensitivity shall be 89dB (1W @ 1m). Long term power handling capacity as defined in EIA-426B test shall be 50W, recommended amplifier power 100W. The nominal system impedance shall be 6 Ohms (in low impedance setting).

The Ceiling Monitor System shall be equipped with a 30W high performance line transformer for use in 70.7 or 100 Volt distributed audio systems with 30, 15, 7.5, 3.75 Watt taps available. An easily accessible rotary switch located on the front baffle shall be available for selecting transformer and low impedance settings. A weather resistant perforated steel grille covers the transducer and switch.

Two support rails and one C-Ring shall be included with the ceiling monitor system.

Bezel diameter 210mm (8.27")

BM Front of ceiling to rear of back can 189.5mm (7.46"), Front of ceiling to top of safety loop 206.8mm (8.14")

PI Front of ceiling surface to rear of speaker unit 135.6mm (5.34"), Front of accessory back can bezel to top of safety loop 153.50mm (6.04")

The Ceiling Monitor System shall be the.....CMS501.

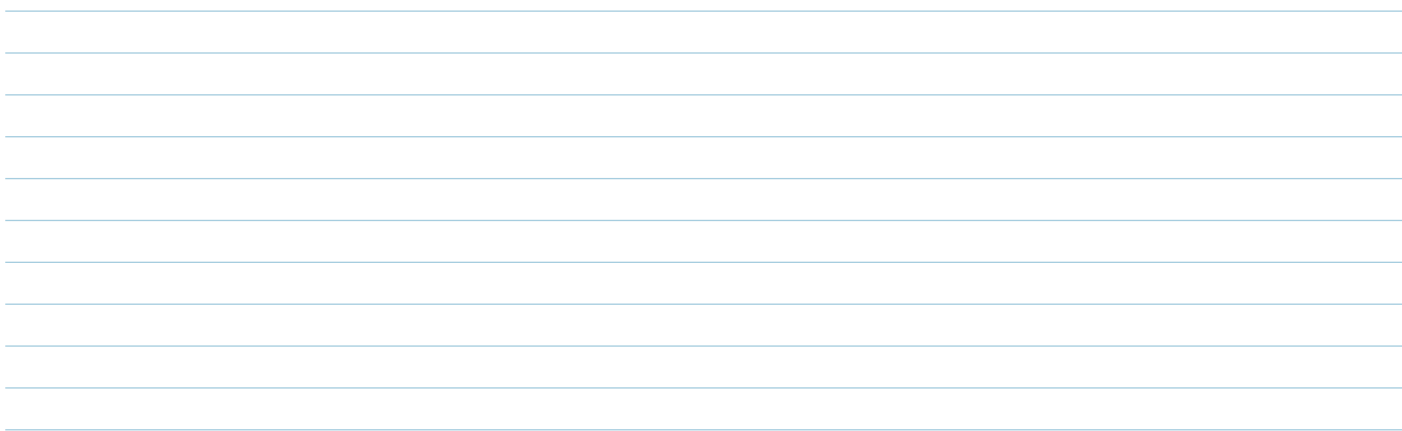
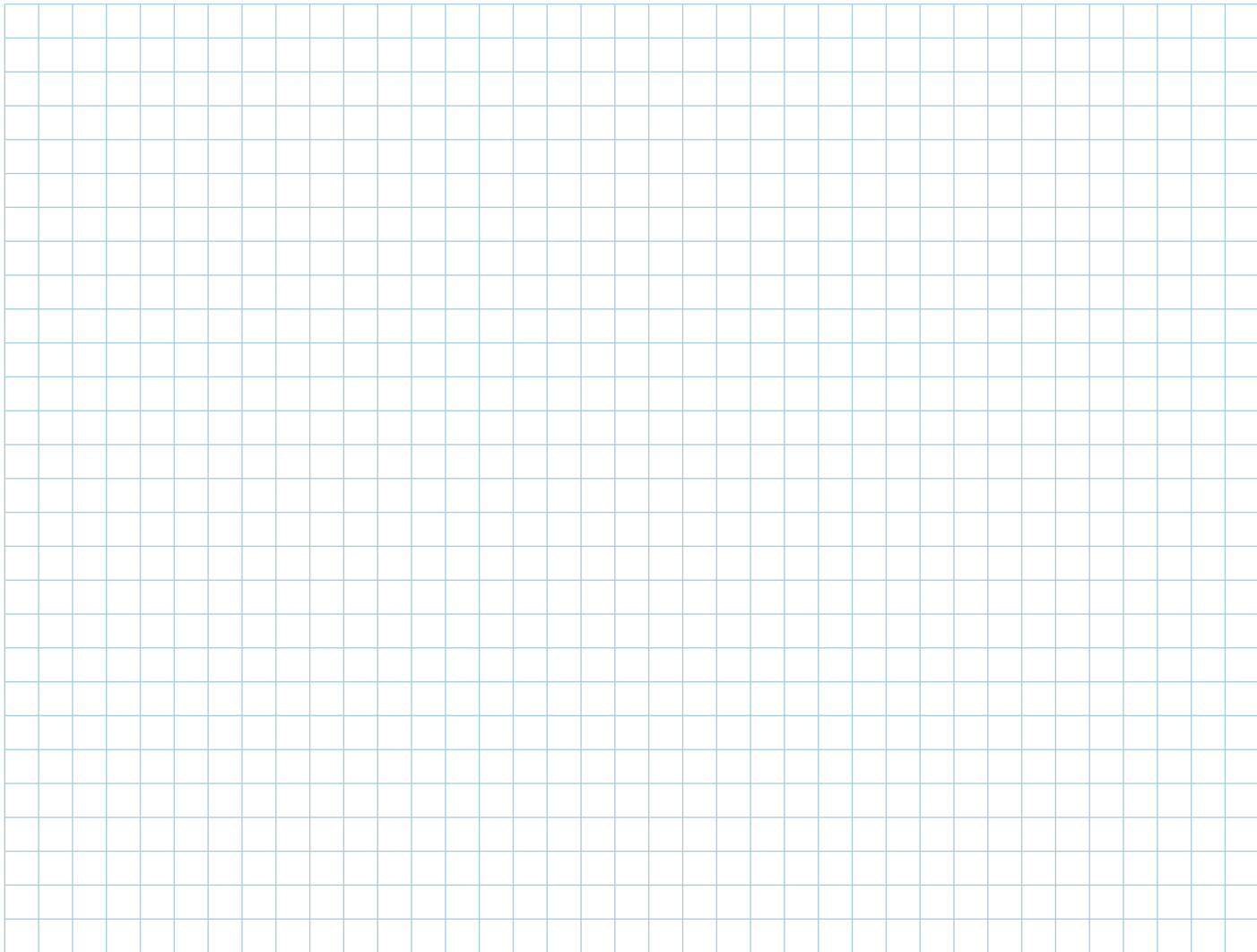
*70 Volt only



CMS501

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